tion, accompanied with an outline of the specification) without stamp, tax, or fees—the patentee to have the liberty to make and sell the thing patented—after which period of time he shall be subjected to a charge of 5*l.* per annum for the remaining term of the patent: neglecting to pay the annual tax, to incur the forfeiture of the patent right."

In considering the advantages to be reaped from such a remedy, the writer remarks:—"As the patentee can at any time determine the patent by ceasing the annual payment, inventions which are not worth working would not long continue to be obstacles to the progress of improvement. This is a great evil at present, and its magnitude would be increased if patents could be obtained without cost, unless my proposal be adopted to compel patentees under some circumstances to grant licenses, so as to prevent patentees from using their patent rights in a manner to become a public nuisance."

Another writer suggests that though to many a medal may be preferred to a money premium at the International Exhibition, the more substantial reward of a cheap patent, as in other countries, would be infinitely preferred by the mass of poor inventors. "To those whose business it is to design articles of mere luxury and fashion, the provisional registration may be of some use, but, as if in mockery of the more useful power of invention, those who cultivate the steam-engine, the locomotive, the loom, the telegraph, or any other important branch of national industry, are left without the slightest encouragement or protection. No doubt there will be many capitalists and manufacturers ready to catch all new ideas appearing at this exhibition, and mere operative skill will be recognised: but what encouragement is there for the intellect—the power of adapting new principles, or of making new modifications of old ones? To the mechanics of this country I would say—urge on every occasion the necessity of removing this prohibitory tax upon your intelligence, more especially since every recent act of the legislature tends to encourage and promote trade competition, and hence reduces, in the aggregate, the value of labour. Ask to be placed on the same footing as your fellow-workmen in other countries, with whom you will be compelled to compete—ask for the privilege of being able to help to raise yourselves—in fact, for a fair field and no favour,—and rely upon it this enormous and unjust imposition will soon be reckoned amongst the barbarous taxes of a bye-gone age."

Mr. Dickens, an old enemy to "Patent-eaters," gives, in his *Household Words*, by a poor inventor, what would be an amusing were it not a melancholy and disgusting detail of bandyings to and fro between the Home-office, the Attorney-general's chambers, Patent-office, Privy Seal-office, Home-office again, Signet-office, Clerk of Patents, Chancellor's Purse-bearer, Clerk of Hanaper, deputy Clerk of Hanaper, Lord Chancellor again, and so on, paying every one as he goes, and, "note, nobody all through ever thankful for their money, but all uncivil," till at length when his grain is well thrashed out of all the chaff, with six weeks' work and lodgings to pay, he is let off at last by "fees to deputy chaff-wax," making up the odds of 96*l.* 7*s.* 8*d.* for a patent for England alone, which yet remains to be run up to more than 300*l.* should it be desirable or possible to extend it to Scotland and Ireland. This plundering fee law is an infinite disgrace to the nation. Now is the time, however, for a long and strong pull all together against it, till the whole superstructure tumble to pieces about the ears of the chaff, and the deputy chaff, and all the other official absurdities heaped up as mere gross pretences for the legal plunder of the "brains of poor inventors."

YORKSHIRE ARCHITECTURAL SOCIETY.—On Thursday, last week, a meeting of this society was held, when the Venerable Archdeacon Creyke was called to the chair. The accounts for the past year were submitted by the Rev. R. E. Batty, treasurer, and a balance of upwards of 200*l.* was declared to remain in hand to the next account. A grant of 15*l.* for the restoration of St. John's Church, York, was made.

RAILWAY JOTTINGS.

THE number of passengers on the railways last year (says a correspondent of the *Morning Herald*) exceeded double the population of the United Kingdom, those travelling by third classes alone exceeding the whole of the population—young, old, rich, and poor. As, however, it can scarcely be supposed that more than one quarter of the people have availed themselves of the advantages of railway transit, it will follow that each passenger, on the average has gone eight trips in the year—a journey to any place and back with return tickets being considered generally as only one journey. The capital already raised by railway companies (says the same writer) exceeds one quarter of the national debt of Great Britain and Ireland, and would be sufficient to purchase the whole of the property in Ireland rated to the poor at twenty years' purchase on the poor-law valuation.——The aggregate amount of traffic on railways in the United Kingdom during the current year shows a very considerable increase over the corresponding period of 1849. The published total receipts from 1st January to 29th September, 1850, amounted to 9,525,707*l.*; corresponding period of 1849 to 8,275,679*l.*; showing an increase of 1,250,028*l.* for that period. The receipts during the first quarter of 1850 amounted to 2,613,237; second quarter to 3,214,903*l.*; and third quarter to 3,697,567*l.*, being an increase over the corresponding periods in 1849 of 283,001*l.* in the first quarter; 422,301*l.* in the second; and 544,726*l.* in the third quarter.——On the London and North-Western the traffic for last week exceeded that for the corresponding period of 1849 by no less than 8,108*l.* The increase in the passenger traffic has been 3,143*l.*, and in the goods traffic 4,837*l.* The increase for the fourteen weeks since the commencement of the present year has been 50,410*l.*—that is, at the rate of 3,600*l.* per week, or 187,200*l.* per annum.——Owing to the reductions of fares between Mansfield and Nottingham, more than 1,000 passengers, treble the usual number, passed between the two towns last week.——Nearly 20,000 persons have visited Southampton, Portsmouth, and Salisbury, by the cheap excursion trains during the last two months.——Parties were taken by a great excursion train lately from London to Edinburgh, Glasgow, and back, upwards of 800 miles, for 17*s.* 6*d.*——An experimental reduction of first and second class fares and day-tickets has been made to and from all stations on the Syston and Peterborough branch of the Midland.——The Railway Commissioners have remitted the tax on excursion trains where they carry passengers at less than a penny a mile.——During a recent excursion from Gloucester to London, with about eight hours allowed in the metropolis, it was found possible to travel from Ross to Brighton and back in 24 hours; allowing one hour and a half in Brighton, and three hours in London, and travelling a distance of 350 miles.—— Herapath, speaking of railway prospects, says, "The conclusions we come to are these, that railways were made too fast for resources of the country, when the trade was so much depressed, and hence the continual sinking of the mileage traffic. The course, however, is now turned, and railroads are beginning to feel the elasticity of the trade of the country. Though above one-fifth of new miles of railway have been opened during the present year more than existed in the past, the traffic per mile has diminished scarcely perceptibly, or at the rate of 54*l.* per mile only. In other words, though the length of lines opened has been increased nearly 21 per cent. so great has been the increase of trade, that the mileage traffic has diminished only about 3 per cent. If, therefore, we can get the capitals closed, and keep men a little honest, there is very little doubt that railways will eventually be good paying properties at par, much less at the prices at which most of them now are. The present pay, we admit, is bad, and has been brought about as much by shareholders' madness in 1845 as by directors' in 1846, by shareholders' carelessness as by directors' extravagance. Even at this day, notwithstanding the woful experience they have had, shareholders at meeting are little better than a flock of sheep."——The Great Northern are about to erect a large locomotive depot at Peterborough, similar to those at Wolverton and Swindon. There will be between 1,000 and 2,000 persons employed.——The South Devon Railway Company lost 364,000*l.* by the atmospheric bubble.——The cost of the high level bridge at Newcastle, as far as we can learn, is the following:—Bridge and works, 360,000*l.*; approaches, 100,000*l.*; property, 120,000*l.*; total, 580,000*l.*——On the Drumlanrig contract of the Nithsdale Railway the viaducts of Carron and Enterkin were completed last week. In honour of this event, the men dined together on Tuesday week, in the Freemasons' Hall, Thornhill.——The Treasury have advanced 130,000*l.* to carry on the Waterford and Limerick Company's works during the winter, and the number of workmen, now amounting to 300, will be greatly increased.——After four years' labour the great tunnel through Mount Carioso, on the Leghorn and Florence Railway, has been completed.——The Austrian Ministry of Trade and Public Works have offered a prize of 20,000 imperial ducats for a locomotive, the most suitably constructed and adapted to convey goods and passengers on the railway of the Semmering Mountains, and 10,000, 9,000, 8,000, 7,000, and 6,000 imperial ducats for the five next best.——The Britannia Tubular Bridge is now complete in all primary respects. The down line through it was opened on Monday, after the tubes were tested with 280 tons of coal in twenty-eight waggons, besides two locomotives. The deflections were only three-quarters of an inch. The train was then taken about a mile distant, and shot through at the utmost possible speed, and the deflection was found to be sensibly less in the way of undulation than when the load was before in the tube. The deflections are nicely observed by means of a water-gauge. Messrs. E. and L. Clark state that the heaviest gales through the Straits do not produce so much motion over the extent of either tube as pressure against the side of the tubes by ten men; and that the pressure of ten men keeping time with the vibrations produces an oscillation of 1¼ inch, the tube itself making 67 double vibrations per minute. The strongest gusts of wind that have swept up the Channel during the late stormy weather, do not cause a vibration of more than one quarter of an inch. When the two tubes are braced together by frames, which is now being done, even these motions, it is expected, will cease. The action of the sun at midday moves them a quarter or three-eighths of an inch. The daily expansion and contraction of the tubes varies from half an inch to three inches, attaining the maximum or minimum at about three o'clock a.m. and p.m. If a compass be held over any part of the bottom of the cells, the south pole is affected, and if over the top, the north is affected; and this is observable in all parts of the tube, and although their position is only about 10 degrees west of the magnetic meridian.——The Earl of Bantry, it is said, has offered to bestow on any one who will construct a railway from Bantry to Berehaven a free gift of all the land on his estates required for the enterprise.

FAILURE OF IRON RAILWAY BRIDGE, TOOLEY-STREET SOUTHWARK.

AN iron girder bridge at the South-Eastern Terminus, London-bridge, gave way on Saturday last, under a quantity of bricks that had been piled on it. The following particulars are given in the *Times*:—"It appears that about two or three years since one of Warren's patent iron span arches was thrown over Joiner-street, Tooley-street, Southwark, in order to afford accommodation to the increasing number of persons travelling by the railway. The span, which was about 60 feet wide, was supported by a number of iron chains, similar to those in use at the suspension-bridges. From the time the structure was completed up to Saturday last not the least deflection was perceptible in any part, but during the past week or so, in order to afford space for stacking the bricks used for building the arcade leading to the entrance of the station, some tons of brick-work have been placed on the roof of the arch. This seems to have been a greater dead weight than the arch was intended to bear, for all of a sudden, on Saturday morning, a report similar to the discharge of a cannon occurred. It was soon ascertained that the immense weight of bricks on the arch

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